

20000608.ba v02\_n918.bam.20000608

>From ???@??? Thu Jun 8 10:07:25 2000 -0500  
Message-Id: <200006081446.e58Ek9F14986@sco.theporch.com>  
Date: Thu, 8 Jun 2000 09:45:44 CDT  
From: Old Tube Radios <boatanchors@theporch.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: BOATANCHORS digest 2918

BOATANCHORS Digest 2918

Topics covered in this issue include:

- 1) REFORMING MULIT-SECTION 'LYTICS  
by JOHN.SEHRING@ecunet.org
- 2) SOLVENTS & PAINTS  
by JOHN.SEHRING@ecunet.org
- 3) Re: REFORMING MULIT-SECTION 'LYTICS  
by Arden Allen <gumbear@pacbell.net>
- 4) Re: AMI  
by Mike Sewell <k0crx@earthlink.net>
- 5) Re: Johnson Matchbox info needed  
by Mike Sewell <k0crx@earthlink.net>
- 6) Dumb question  
by James.Reid@merisel.com
- 7) RE: Dumb question  
by "Ed Tanton" <n4xy@att.net>
- 8) I.F. Tranny Replaced -- GPR-90 Playing Nicely  
by "Grant Youngman" <nq5t@home.com>
- 9) Re: Dumb question  
by "Roberta J. Barmore" <rbarmore@email.msn.com>
- 10) Re: Reforming, Chapter CCXXVI  
by Henry van Cleef <vancleef@netcom.com>
- 11) Re: Dumb question (More dumb questions)  
by Don Reaves <dr@cei.net>
- 12) Re: Dumb question (More dumb questions)  
by "Mike B. Feher" <n4fs@monmouth.com>
- 13) RE: I.F. Tranny Replaced -- GPR-90 Playing Nicely  
by "Bill Hawkins" <bill@iaxs.net>
- 14) GPR 91  
by thompson@mindspring.com
- 15) Re: GPR 91  
by "Hue Miller" <kargokult@proaxis.com>
- 16) Re: Dumb question (More dumb questions)  
by "Mike B. Feher" <n4fs@monmouth.com>
- 17) HV  
by "w2tu" <w2tu@email.msn.com>
- 18) NEED SOURCE FOR HP 410 AC PROBE TIP??

- by Michael Crestohl <mc@sover.net>
- 19) Multi-section Caps  
by "Rhett T. George" <rtg@ee.duke.edu>
- 20) RE: long life of Tek scope electrolytics  
by "Shriver, John" <john.shriver@intel.com>
- 21) ME-6D/U Voltmeter  
by polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)
- 22) Swan's song significant ?  
by mnhopkins@juno.com

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Date: Wed, 7 Jun 2000 17:59:04 -0400 (EDT)  
Message-Id: <200006072159.e57Lx4m21165@ecunet.org>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: REFORMING MULIT-SECTION 'LYTICS  
From: JOHN.SEHRING@ecunet.org

I think the original question about reforming mulit-section lytics may have to do with exactly how/what makes them multi-section.

Are there actually several electrically independant lytics inside the cans with their negative leads tied together & to the can? Or is there a common anode (cathode?) inside the can, i.e. that the multi sections share the chemistry?

-John Sehring (Tue, Jun 6, 2000, Ipswich SD) UCC WB0EQ

-----  
Date: Wed, 7 Jun 2000 17:59:03 -0400 (EDT)  
Message-Id: <200006072159.e57Lx3H14466@ecunet.org>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: SOLVENTS & PAINTS  
From: JOHN.SEHRING@ecunet.org

To: boatanchors@theporch.com

This discussion got me thinking about comparing the factory paint on BA's.

The following is based on my necessarily limited experience, i.e. I have \*not\* owned a statistically-meaningful number of any of these!

Worst: E.F. Johnson (thin, comes off far too easily, lacquer?)

Best: R.L. Drake front panels  
Hammarlund cabinets (not front panels)  
National, e.g. NC-125 (nice, shiny, quite scratch resistant)  
Collins S-Line cabinets (front panels don't count--what are they, fake leatherette?)

The rest fall in between.

-John Sehring (Tue, Jun 6, 2000, Ipswich SD) UCC WB0EQ

-----  
Date: Wed, 07 Jun 2000 16:30:06 -0700  
From: Arden Allen <gumbear@pacbell.net>  
Subject: Re: REFORMING MULIT-SECTION 'LYTICS  
To: Old Tube Radios <boatanchors@theporch.com>  
Message-id: <0FVT00K8E59FNL@mta5.snfc21.pbi.net>  
MIME-version: 1.0  
Content-type: text/plain; charset=ISO-8859-1  
Content-transfer-encoding: 7bit

Hi John;

> Are there actually several electrically independant lytics inside the  
cans  
> with their negative leads tied together & to the can? Or is there a  
common  
> anode (cathode?) inside the can, i.e. that the multi sections share the  
> chemistry?

>From the multi-section 'lytics I have demolished it looked like there was a  
common foil for the can's sections. As an electrolytic is initially formed  
the layer of insulating aluminum oxide starts at zero thickness and builds  
up to a thickness that will withstand the applied voltage (the thicker the  
oxide the lower the capacitance). If a capacitor is operated for a  
prolonged period at a significantly lower voltage than the voltage that it  
was originally formed to the oxide layer will decrease in thickness until  
the leakage increases to the point where the formation process stabilizes  
and maintains the oxide layer thickness. I don't know what voltages would  
have been applied to, for example, a 350, 250, 50 volt per section  
capacitor. It would be interesting at least for academic gratification  
purposes to know. Anybody?

Arden Allen KB6NAX Vallejo, CA gumbear@pacbell.net

-----  
Message-ID: <393EE0AB.1D0B6D9E@earthlink.net>  
Date: Wed, 07 Jun 2000 18:54:19 -0500  
From: Mike Sewell <k0crx@earthlink.net>  
MIME-Version: 1.0  
CC: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: AMI  
Content-Type: text/plain; charset=iso-8859-1  
Content-Transfer-Encoding: 8bit

To: Old Tube Radios <boatanchors@theporch.com>

Yes, read about AMI monthly in Electric Radio!!

73, Mike

K ÿ Collects Radios eXclusively/WPEÿCFK

Sandy W5TVW wrote:

> AMI is alive and well! Contact them at AMI, Box 1500, Merrimack,  
> NH 03054  
> Dale Gagnon, KW1I is the president.  
>  
> 73,  
> Sandy W5TVW  
>  
> Subject: AMI  
>  
> >Whatever happened to this organization? Is it still active and  
> >collecting dues?  
> >--  
> >David Knepper - W3ST  
> >Publisher of the Collins Journal  
> >Secretary of the Collins Radio Association  
> >Club Station - W3CRA  
> ><http://www.citipage.com/collins/>  
> >  
> >

-----  
Message-ID: <393EE5B1.586304A3@earthlink.net>  
Date: Wed, 07 Jun 2000 19:15:45 -0500  
From: Mike Sewell <k0crx@earthlink.net>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
CC: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Johnson Matchbox info needed  
Content-Type: text/plain; charset=iso-8859-1  
Content-Transfer-Encoding: 8bit

Al,

Answers to your questions follow ---

modsteph@ACS.EKU.EDU wrote:

> Gang,  
>

> I am working on a Johnson KW Matchbox and have found some strange  
> things, obviously not part of the original. Questions:  
>  
> (1) Is the wiring for the KW Matchbox the same as for the 275-watt  
> model, just larger?

Yes, the impedance matching circuitry is nearly identical except for power-handling capacity. One slight difference is the larger unit provided an unbalanced coaxial output while the smaller unit did not. A simple and common homebrew adapter can provide the coaxial output for the smaller unit.

>  
> (2) Is the VSWR gizmo that plugs into the meter in the KW version  
> the same as the one for the lower power one (and of course I did not  
> get same with this unit)

Yes, Johnson part number 250-37, official Johnson nomenclature - 'directional coupler'. These little cylinders are fairly abundant. I see them on eBay occassionally and at hamfests.

>  
> (3) Is there a copy of the manual out there I can get? This does  
> have an extra connection (grounding strap for one side of the balanced  
> wire outputs) so info would help.

Yes, send me your address and I'll snail-mail you all the Johnson Matchbox documenation you can stand!!

>  
> (4) Is the rectifier circuit to provide DC to the T-R relay stock,  
> or was that added?

The rectifier circuit is part of the original Johnson design for the 1-kw Matchbox (part no. 250-30), NOT the 275-watt unit (part no. 250-23).

>  
>  
> Main thing I have so far done is basic clean-up: it belonged to  
> a heavy smoker...

>  
> One other question: is there any modification or plan out there  
> for building the SWR detector to feed the meter INSIDE the box? It  
> should not be too difficult.

>  
> 73, Al N5AIT

>

> -----

> This message was sent with EKU Webmail.

Have fun!

73, Mike

K ÿ Collects Radios eXclusively/WPEÿCFK

-----  
Mime-Version: 1.0  
Date: Wed, 7 Jun 2000 18:25:27 -0700  
Message-ID: <00976D6B.C22034@merisel.com>  
From: James.Reid@merisel.com  
Subject: Dumb question  
To: Old Tube Radios <boatanchors@theporch.com>  
Content-Type: text/plain; charset="US-ASCII"  
Content-Transfer-Encoding: 7bit  
Content-Description: cc:Mail note part

Greetings,

I'm trying to measure some 2nd anode voltage on my TV project. I have a Simpson model 00411 hi-v probe and a 260 Series 7 VOM. I have no clue what to set the selector switch on to get a reading. I really didn't feel like guessing since this is still a pretty cherry meter. Thanks for any help you can provide.

-Jim

-----  
From: "Ed Tanton" <n4xy@att.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: RE: Dumb question  
Date: Wed, 7 Jun 2000 21:35:54 -0400  
Message-ID: <CKEGICNFDIMCEKEDCEHFEEJDCLAA.n4xy@att.net>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="US-ASCII"  
Content-Transfer-Encoding: 7bit

Usually, they are 10x or 100x... that is, multiply your meter reading by 10 or 100. It should be marked on the probe somewhere. I would just use the highest voltage range that gives you a > 1/2 scale reading, starting with the highest voltage setting, and backing off.

73 Ed Tanton <n4xy@arrl.net> K2# 0057 (FT)

Technical Editor QRP ARCI "QRP Quarterly"

website: <http://www.qsl.net/n4xy/>

> -----Original Message-----

> From: owner-boatanchors@theporch.com

> [mailto:owner-boatanchors@theporch.com]On Behalf Of

> James.Reid@merisel.com

> Sent: Wednesday, June 07, 2000 9:25 PM

> To: Old Tube Radios

> Subject: Dumb question

>

>

> Greetings,

> I'm trying to measure some 2nd anode voltage on my TV project. I have a

> Simpson model 00411 hi-v probe and a 260 Series 7 VOM. I have no

> clue what to

> set the selector switch on to get a reading. I really didn't

> feel like guessing

> since this is still a pretty cherry meter. Thanks for any help

> you can provide.

>

> -Jim

>

>

-----  
From: "Grant Youngman" <nq5t@home.com>

To: Old Tube Radios <boatanchors@theporch.com>

Date: Wed, 7 Jun 2000 22:10:40 -0500

MIME-Version: 1.0

Content-type: text/plain; charset=US-ASCII

Content-transfer-encoding: 7BIT

Subject: I.F. Tranny Replaced -- GPR-90 Playing Nicely

Message-ID: <393EC860.23804.FCBF9B9@localhost>

Gents ...

Thanks to all for the suggestions, offers of help, and general notes of commiseration when I reported that an IF transformer in my GPR-90 died at my own hand ...

I have not found an original T-6 (but I'd still like to find one, if there's one out there). I effected repair by fitting a transformer from an R-390A. The operation was fairly straightforward and mostly preserves the appearance of the radio.

I removed the central core and capacitors from the original GPR-90 transformer's base. There is just enough room to mount the R-390A transformer (less metal cover) right to the old base after drilling the old one

out to accept the mounting studs and solder lugs. A small half circle of material has to be removed from two sides of the bottom phenolic support on the R-390A transformer to allow it to pass the mounting nuts integral to the original base and sit flush. The new assembly mounts in the radio like the original and the old can fit over it nicely after cutting the top support screws in the R-390A core flush with their nuts. I also removed the two 38K resistors which parallel the coils in the R-390A transformer, and added back the 56K resistor on the primary side, a la the GPR-90 transformer.

The only difference in appearance is that the IF can is open at the top rather than having the upper mounting nut and tuning slug of the original configuration. Even that would be fixable if I was a bit more retentive, and couldn't live with the change :-)

Seems to work fine. I'll measure the pass-band after realigning everything, but there don't seem to be any ill effects.

There IS life after disaster ... thankfully.

Regards ..  
Grant

-----  
Grant Youngman / NQ5T  
nq5t@home.com  
<http://www.globeking.com>  
Double Oak, TX -- nr Dallas

-----  
Message-ID: <001b01bfd0fe\$9653ad00\$c05e0387@satellite>  
From: "Roberta J. Barmore" <rbarmore@email.msn.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Dumb question  
Date: Wed, 7 Jun 2000 23:04:03 -0500

For whatever it's worth....

I'm looking at the info for a Simpson 00034 DC High Voltage Test Probe, for use with 260-3 through 260-6 VOMs (up through when they went to "safety" connectors for the probes). For that model, they say to use the 2.5V setting, but to read voltage on the 0-10 scale and multiply by 1000.

I don't know if later versions work similarly--be careful and don't cook your meter!

(Don't cook yourself, either--Simpson's info strongly suggests not having the probe or meter in your hands when you make HV measurements, and it's a good idea).



--Bobbi

-----  
From: Henry van Cleef <vancleef@netcom.com>  
Message-Id: <200006080422.VAA21671@netcom.com>  
Subject: Re: Reforming, Chapter CCXXVI  
To: Old Tube Radios <boatanchors@theporch.com>  
Date: Wed, 7 Jun 2000 22:22:37 -0600 (MDT)  
Cc: boatanchors@theporch.com  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Don, I don't think it makes much difference whether you do it a section at a time or multiple sections all together. Indeed, I think we sometimes may make too much of a process out of reforming old caps.

Consider the Tek 530/540 scope. These are chock full of Mallory FP's (don't think Tek used any other in these), and have a time delay relay. Turn it on, and if it isn't smoking after 45 seconds, the relay clicks in, and everything gets hit with volts from some very large (amps continuous) power supplies. Yet they always come back to life. I swapped notes with Stan Griffiths on this a while back, and both of us have only had to replace a very few that had lost their capacitance.

Generally, when I light up an unknown scope for the first time, I have VTVM's on all of the power supply voltages (-150, 100, 225, 350, 500) and watch them as the relay clicks in. Generally the meters jump to life right where I would expect them, and most of the time, if they don't, it's poor contact with one of the regulator control tubes. I do limit the first run to a couple of minutes after the relay kicks in, and do a couple of more short (5-10 minute) runs while checking to see if the CRT lights up and if the horizontal stuff is working. That's forming with a vengeance.

I'd hang some voltmeters on those Aerovoxes and hit them with working voltage applied to the other end of some 100 ma. current limiting resistors, and watch them come up. Turn them on and off a few times and let them cool if they are slow to come up. After toasting with low leakage for half an hour, check them for capacitance and low series resistance. Generally, when a cap of this type is tired, it will discharge to ground through 1K, then the voltage (measured on a typical 11 megohm VTVM) will come back up to 10% or more of the charging voltage. That's the sign of a sick puppy. I've got a 1944 box with a bunch of 3-section Aerovoxes (20-20/450, 40/50, I think)

that are all bad (series resistance). FP's generally come right up, even the 1941 jobs, unless they're leaking "coolant" (obvious) or have dried out.

The ones that would short were the wets from the 1930's. My theory on this is that the electrolyte attacked the plates and the metal ions in solution made them conduct, with no film interface. The dries are not "dry," but the electrolyte is held in a blotting paper. All of the electrolytes I know of are boric acid based, but I think the manufacturers got smart about putting corrosion inhibitors in these (always proprietary) solutions by 1940.

The little caps that get hot and go bang, like firecrackers, are tantalums, and I think their electrolyte is a nitric acid based solution. Very nasty. I recall having lots of trouble with popping tantalums in the '60's, but most of this was traced to installation with reversed polarity.

Hank

-----  
Date: Wed, 7 Jun 2000 23:59:48 -0500 (CDT)  
From: Don Reaves <dr@cei.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
cc: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Dumb question (More dumb questions)  
Message-ID: <Pine.LNX.4.10.10006072322390.14937-1000000@wa5bbs.radiohome.com>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

Bobbi admonishes us not to cook ourselves. Good advice!

Did any one see the cable television program called High Voltage this past week, profiling linemen working on high tension lines? Discovery channel, History channel? Can't remember. What was memorable was the extreme care linemen take dealing with up to 500kv transmission lines. Unbelievable how they make themselves, their hot sticks, their cherry pickers, even their helicopters at the same potential as the line they need to work on.

I've climbed a few telephone poles in my younger days but there isn't any way I'd even get close to a transmission line that will reach out 11 feet 6 inches across the ether and vaporize me. I've seen what 6KV lines can do to hot dogs on a wooden stick.

Watch this show. Maybe someone has exact details of an upcoming replay. I'm going to think about this every time I climb inside a high voltage power supply.

I bought a nice NOS shorting stick at a hamfest in April. Its a foot long stick of phenolic like insulation material, with a 4 inch long 1/4 inch steel shorting bar and hook on the business end. A 6 foot braided wire insulated by heavy see-thru tubing completes the instrument. So my question is, can I approximate a safe working voltage based on the 12 inch insulating handle? The tubing is oily, sticky. Should I clean it, or leave it as is?

Don Reaves W5OR  
Little Rock AR EM34  
CCA, QCWA, AMI  
dr@cei.net

-----  
Message-ID: <004801bfd109\$526c3fc0\$378abd18@Feher>  
From: "Mike B. Feher" <n4fs@monmouth.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: "Old Tube Radios" <boatanchors@theporch.com>  
Subject: Re: Dumb question (More dumb questions)  
Date: Thu, 8 Jun 2000 01:20:50 -0400  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

A few months ago I had to rebuild my high voltage glass plate oscillation transformer in my spark gap transmitter in preparation for a lecture at Princeton, a local college. Boy what a learning experience. Interestingly after a few failures, by continuing to break glass plates, the experiments I made were very educational (to me anyway). I will make a long story short. I got some transformer oil from the local electric utility. First, I placed two strips of about 1/2 inch wide aluminum foil, flat at both ends about 1/2 inch apart. I put a piece of glass below and above the foil to keep it in place as well as to insulate it from the work surface. Fortunately, I also have a variable power supply that goes up to 30 KV at 2 MA max but is great for measuring breakdown. At 10 KV, sparks were jumping between the aluminum pieces. I put a little oil in there, put the glass plates together again, with the same separation between the aluminum foil. And low and behold. I went all the way up to 30 KV and no sparks. I guess the bottom line is the oil will probably protect you more than if you were to clean it. There are several reference text books that give the breakdown voltages for various dielectrics. 73 - Mike

Mike B. Feher, N4FS  
89 Arnold Blvd.

Howell NJ, 07731  
(732) 901-9193

The tubing is oily, sticky. Should I clean it, or  
> leave it as is?

>

>

> Don Reaves W50R  
> Little Rock AR EM34  
> CCA, QCWA, AMI  
> dr@cei.net

>

>

-----  
From: "Bill Hawkins" <bill@iaxs.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: RE: I.F. Tranny Replaced -- GPR-90 Playing Nicely  
Date: Thu, 8 Jun 2000 00:38:03 -0500  
Message-ID: <000101bfd10b\$b6e57640\$290aa8c0@darius>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

You mean that after all that stuff about stripping Litz wire you  
didn't even try it? Or did you try it and nothing worked? Some  
feedback would help those in similar situations.

<tale of replacing the transformer with one designed for the 390A  
deleted ... >

Regards,  
Bill Hawkins

-----  
From: thompson@mindspring.com  
Message-ID: <006701bfd10f\$62d4efa0\$3b5a56d1@default>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: GPR 91  
Date: Thu, 8 Jun 2000 02:04:19 -0400

A Canadian friend sent me a pic of his rack mounted GPR 91. He says its  
basically the GPR 90  
with some three letter appendix. He said it was sold to his commercial  
company in 1964 with the rack mounting  
and never had a case altho you could buy the GPR-90 cabinet if you wanted.

He is just a SWL so wants to know how this is different from the GPR 90 and is this a model between the 90 and later GPR 92?

looks nice but I never was impressed by the GPR 90...not even close to the SP600 or most Hammarlunds (145, 170, or 180).

Dave K4JRB

-----  
Message-ID: <000c01bfd114\$31d113c0\$49c46ac6@oemcomputer>  
From: "Hue Miller" <kargokult@proaxis.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: GPR 91  
Date: Wed, 7 Jun 2000 23:35:23 -0700  
MIME-Version: 1.0  
Content-Type: text/plain;  
        charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

-----Original Message-----

From: thompson@mindspring.com

|looks nice but I never was impressed by the GPR 90...not even close to the  
|SP600 or most Hammarlunds (145, 170, or 180).

|Dave K4JRB

--In what sense? Construction, and /or operation?

Tnx, Hue Miller

-----  
Message-ID: <005201bfd134\$91590c60\$378abd18@Feher>  
From: "Mike B. Feher" <n4fs@monmouth.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: "Old Tube Radios" <boatanchors@theporch.com>  
Subject: Re: Dumb question (More dumb questions)  
Date: Thu, 8 Jun 2000 06:30:25 -0400  
MIME-Version: 1.0  
Content-Type: text/plain;  
        charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Sorry about that. It was late and I just got home from Dallas. Of course I meant glass plate condenser and not transformer. 73 - Mike

Mike B. Feher, N4FS

89 Arnold Blvd.  
Howell NJ, 07731  
(732) 901-9193

> A few months ago I had to rebuild my high voltage glass plate oscillation  
> transformer in my spark gap transmitter in preparation for a lecture at

-----  
Message-ID: <006e01bfd13b\$5f4fbc80\$7258143f@W2TU>  
From: "w2tu" <w2tu@email.msn.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: HV  
Date: Thu, 8 Jun 2000 07:19:00 -0400

As a construction electrician for 45 years before retirement I have worked on many HV systems. Our "inside wiremen" usually work on voltages in the lower ranges but often work with 2300/4160 and up to 13,200 in the larger industrial complexes.

We have always been warned by our utility counterparts (linemen) that much of the equipment they discard for defects (gloves,blankets,sticks,etc.) show up at fle markets (This would include hamfests). The problem is that with this type of gear even a small pinhole or contaminated device would be dangerous but still look in tip-top condition. Any of our HV equipment is usually sent to a testing lab monthly to make sure it is safe.

The ground stick that Don describes sounds like one we would use with 3'-4' insulated extensions to make it usable to reach power lines. Obviously any grease or foreign material on the handle would compromise it's dielectric strength. (Insulation quality)

Hope this helps - BE CAREFUL WITH HV!

gl es 73

Paul B. W2TU

-----  
Message-Id: <4.2.2.20000608072538.00b83400@mail.sover.net>  
Date: Thu, 08 Jun 2000 07:27:57 -0400  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Michael Crestohl <mc@sover.net>  
Subject: NEED SOURCE FOR HP 410 AC PROBE TIP??  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

Does anyone know a source for the replaceable tips for the HP11036A AC Probe for the 410B/C series VTVM? I have a couple that need new tips badly!!!!

73,

Michael Crestohl, W1RC  
mc@sover.net

-----  
From: "Rhett T. George" <rtg@ee.duke.edu>  
Date: Thu, 8 Jun 2000 09:02:45 -0400  
Message-Id: <200006081302.JAA01868@champ.ee.duke.edu>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Multi-section Caps

- Greetings -

After I go tear up an electrolytic, I'll know whether I'm right or wrong. But here goes. The dielectric of the cap is the oxide or salt coating which is partly applied to the blank sheet of aluminum. The process is completed after the mechanical assembly of the cap. The electrolyte-soaked separator prevents abrasion of the oxide by the other electrode and serves as a source of electrolyte to reform failed spots.

This means that the electrolyte itself is a good conductor. Therefore it is necessary to keep the electrolyte of one section out of contact with that of other sections.

Now, I'll look for a dead one to tear apart and see if I'm right.

73 Rhett - KE4HIH

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Message-ID: <392A357CE6FFD111AC3E00A0C99848B003694E70@hdsmsx31.hd.intel.com>  
From: "Shriver, John" <john.shriver@intel.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: RE: long life of Tek scope electrolytics  
Date: Thu, 8 Jun 2000 06:39:02 -0700  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"

I think Tek was really careful about low ripple current in their caps. The regulators took out much the ripple, rather than brute-force filtering.

Also, Tek didn't build 500V supplies. They built a series of modest supplies in series. Each individual transformer winding is putting out

somewhere between 100 and 200 volts. So the FP capacitors are running at rather modest voltages. They're not seeing the 400 to 475 volts that you see in "consumer" gear. I suspect that the 400 and up FP caps were really pushing the technology to the limit. By comparison, the 200 to 350 volt units are probably MUCH more reliable.

Also, the Tek scopes ran C00L. Either by design (560 series), or by a fan (530 and 540 series). Temperature is the enemy of these electrolytic caps. The current 20/20/20/20 at 450V FP caps that are being made are only rated at 65 degrees C, not 85 degrees C like they used to be. Lots of ham (and audio) gear runs hot, this is hell on the FP caps.

So, if you're replacing a 450V cap, two 250V caps in series (twice the capacitance each, with swamping resistors), will probably be MUCH more reliable. Of course, the new electrolytics are much more reliable anyways...

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Date: Thu, 8 Jun 2000 10:36:17 -0400  
From: polepeeg@aa4rm.ba-watch.org (Marty's Refl. Drop)  
Message-Id: <200006081436.KAA00478@aa4rm.ba-watch.org.>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: ME-6D/U Voltmeter

Here's a hamfest gizmo that I just had to drag back

It appears to be an AC voltmeter with input  $Z=500$  ohms. Has range/scale ceramic rotary switch deck that seems to be Xc-compensated on lower ranges.

It's gray, 11"x6"x5" give or take, has ~4" round sealed meter. and 110VAC. But ID plate & power xfmr missing, etc. missing.

And I find the awol xfmr is the tip of the iceberg since the ckt. diag. was just discovered in the case-back

There's a whole amp. with a 5879 & 2 6AH6s, etc. that's gone.

But outside looks pretty good.

Does anyone have one of those chassis?

Or is there someone with a dingy ME-6 that needs my good externals to dress it back up? If so, I'll trade for anything of 75A4 value or less.

And I'll never use it or the exchange item on Memorial Day or while sipping tea on any porch. Promise.



Tks/73s,

Marty

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To: Old Tube Radios <boatanchors@theporch.com>  
Date: Thu, 8 Jun 2000 08:03:25 -0500  
Subject: Swan's song significant ?  
Message-ID: <20000608.093723.-1033699.1.MNHopkins@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain  
Content-Transfer-Encoding: 7bit  
From: mnhopkins@juno.com

Reading John's comments on SSB audio, below, I recalled once owning a Swan 240 with an exceptionally clean sound. I assumed it came from a wider-than-later xtal filter, and thought it might have been nice when sweet sounding 'phasers and wide pass filter rigs ruled.

My second assumption was that, even if I put a Swan 240 up today, the sound would be SOS. Seems overdriven audio and Procrustean 'processing predominates. I have a pal who got 6M WAS because of his speech processing. It made him sound like a YL.

So, sonic scholars, is the sorry state of SSB sound mostly a product of foot-to-the-floor feed or afterthought audio stages at home?

> Low distortion in detector/af stages (e.g. by proper gain  
> distribution & control, and sufficient linearity, frequency response &  
>dynamic range, low self noise) will make sure that QRN & QRM will be  
>racefully handled by them, i.e. won't intermodulate, or cause overload  
>or harmonic distortion on the signal you want to hear. These kinds of  
>distortions will actually \*add\* QRN/M to the desired signal.  
> --John, WB0EQ

73 de ab5L, michael in dallas, cataloger of converters,  
Student of 6M's Golden Age: 1956-58. Box 226841, 75222  
MNHopkins@JUNO.com

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End of BOATANCHORS Digest 2918  
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